

REMARKS

Claims 1-25 are now pending in the application. Claims 11-25 are withdrawn as to a non-elected group. Minor amendments have been made to claims 8 and 23 to simply overcome the rejection under 35 U.S.C. § 112. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

SPECIFICATION

Applicants have amended paragraphs [0036] and [0037] and the heading of the Table therebetween to designate the Table and accompanying description as "Table 2" instead of "Table 1." The earlier table between paragraphs [0032] and [0033] is designated as "Table 1."

REJECTION UNDER 35 U.S.C. § 112

Claim 8 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point and distinctly claim the subject matter which Applicants regard as the invention.

Claims 8 and 23 have been amended as per the Examiner's suggestion to read "one of carbon or graphite" and to place the claims in proper Markush format. Withdrawal of the rejection and reconsideration of the claims are respectfully requested.

REJECTION UNDER 35 U.S.C. § 102

Claims 1-10 stand rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Denton et al. (U.S. Pat. No. 6,010,606) (hereinafter Denton). This rejection is respectfully traversed.

Independent claim 1 of the present disclosure contains at least one feature that is not present in the Denton reference and therefore is not anticipated by Denton. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

In particular, independent claim 1 includes a membrane-electrode assembly that has permeable diffusion media that is rigid along a transverse axis, flexible along a lateral axis and having a substantially incompressible thickness, wherein the transverse axis (i.e., the rigid axis) crosses first channels of the flow field. For example, a portion of a PEM fuel cell stack constructed according to the teachings of the present disclosure is shown in FIG. 2. The X-axis in FIG. 2 corresponds to the rigid, transverse axis of the permeable diffusion media and reference numerals 20a and 20b illustrate flow channels of the flow field.

Nowhere in the Denton reference is a permeable diffusion media, which is rigid along a transverse axis and flexible along a lateral axis for use in a PEM fuel cell, either expressly or inherently described. Instead, Denton only discloses a highly flexible gas diffusion electrode. Col. 4, lines 32-34. Nothing in Denton indicates that the gas diffusion electrode is rigid along a transverse axis and still flexible along a lateral axis.

The gas diffusion electrode in Denton is expressly described as highly flexible and dimensionally stable. "Dimensionally stable" as used in Denton appears to describe resistance to stretching in comparison to conventional gas diffusion electrodes based on woven cloth substrates (i.e., the Denton gas diffusion electrodes are stable regarding stretching in the x and y directions). Col. 2, lines 50-62. Thus, the Denton gas diffusion electrode having non-woven fibers appears to be highly flexible and dimensionally stable so that it cannot be stretched in the directions of the major planar faces (x and y directions) unlike the conventional gas diffusion electrodes based on woven cloth substrates. It appears that Denton gas diffusion electrodes are highly flexible along both the x and y axis's, unlike the present disclosure.

In sum, the reference fails to disclose all the features of independent claim 1. Accordingly, the remaining dependent claims 2-10 are not anticipated by the reference. Applicants respectfully request withdrawal of the rejections and reconsideration of the claims.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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